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ABSTRACT

Therapeutic horseback riding for persons with disabilities provides physical, mental, social, and emotional benefits. Most research in this area has focused on the product or benefits of therapeutic riding, while the process of teaching horseback riding has received little attention. Research from the fields of regular education, special education, physical education, and adapted physical education is reviewed and applied to the process of teaching therapeutic horseback riding. A survey of 17 therapeutic horseback riding instructors and 22 riding instruction evaluators is reported, revealing that instructors tended to view therapeutic riding instruction as an art and evaluators tended to view therapeutic riding instruction as a profession, and that instructors need to improve their skills in order to improve effectiveness. Ratings of instructional skills of riding instructors indicated that safety was rated as the most important skill by both instructors and evaluators, and modifying instruction to accommodate student needs was second, with other rankings varying between the two groups. A review of equestrian books containing information for horseback riding instructors demonstrated only a cursory review of riding instructor qualities. The therapeutic riding industry is urged to take up the challenge to identify meaningful relationships between effective teaching and student learning. (Contains 28 references.) (JDD)

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The Process of Teaching Therapeutic Horseback Riding

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This paper includes information presented November 14, 1993 at the Annual Conference of the North American Riding for the Handicapped Association (NARHA), Lexington, Kentucky.

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Abstract

Therapeutic horseback riding for persons with disabilities is fast becoming a recognized profession. Most research has focused on the product or benefits of therapeutic riding. The process or the "hows" and "whys" have received little attention. There is no knowledge base to look to in regard to the process of therapeutic riding instruction.

This paper provides an overview of the teaching process and how it relates to therapeutic horseback riding instruction. Topics include: What can we learn from other educational research; What are the measures of instructor effectiveness; Is riding instruction a profession or an art; Where should we go from here.

The Process of Teaching Therapeutic Horseback Riding

Therapeutic horseback riding for persons with disabilities is a fast growing field. Operating centers that are affiliated with the national organization, the North American Riding for the Handicapped Association (NARHA) have increased from 39 in 1976 to 433 in 1992. Rapid growth of the field has partly occurred due to demand for services from the disabled community (Copeland, 1992). Keeping pace with the growth of the industry has been challenging. As therapeutic riding becomes an accepted profession the pedagogical implications must be reviewed. One of the implications demanding review is the "process" of teaching therapeutic riding.

Before looking at the "process," it will be helpful to discuss the "product" of therapeutic horseback riding. A definition of product is a direct result, consequence, or benefit. The product or benefits of therapeutic riding are often discussed by the recitation of the familiar line: "Therapeutic horseback riding provides physical, mental, social, and emotional benefits."

Everyone has often seen the familiar lists of benefits such as:

-Normalize muscle tone
-Improve balance and coordination
-Develop pre-ambulation skills
-Enhance body awareness
-Improve motivation
-Increase self-confidence

-Allow a feeling of freedom and independence
-Improve socialization
-Provide an exciting life long activity

The product can be thought of as the end result such as the self satisfaction of winning a ribbon, learning right from left, or improving the rider's posture.

The need to document the benefits or "product " of therapeutic horseback riding has been necessary in order to substantiate and validate why horseback riding is beneficial to persons with disabilities. There is an increasing demand for this information from third party payment sources, educational institutions, parents, students and funding sources.

The definition of "process" is a series of actions, changes, or functions that bring about an end or result, the hows and whys. The process of riding is the teaching. What does someone do or provide in order to achieve the product. The process is very important to the final outcome. If the process is inferior than the result can be inferior. The process works best when it is effective.

Current research in therapeutic horseback riding has mainly focused on product research. In addition much of the research has been in the medical realm of therapeutic riding. Many studies describe the process used to achieve the product. The descriptions however vary in detail. Little can be determined as to the effectiveness of the process or the teaching. The end result is what is measured.

Locke stated in 1977:

> "Some innovative methodology (in this case horseback riding) is introduced and then subject to evaluation by measurement of student achievement, without any observation of the events through which the innovation was mediated- teaching"

A look to several samples of therapeutic riding research will illustrate this point:

In 1988, Bertoti conducted the first objective clinical analysis of horseback riding intervention. Her study showed significant improvement of posture of children with cerebral palsy during therapeutic riding. The study did address how the sessions were to be conducted, what equipment to be used, that the same activities were used during every treatment, that every session was provided by the same therapist, provided an example of a typical lesson, and addressed the qualifications of the therapist.

A study by Biery and Kauffman in 1989 indicted that therapeutic riding has a positive effect on balance of persons with mental retardation. The study lists the exercises used during the session and identified goals for each exercise.

Brock's 1987 study indicated improved arm coordination in physically disabled adults. Brock provides a general description of the riding program.

Emory in 1992 conducted a study in the educational division of therapeutic riding. The results of the study indicated that therapeutic riding is an effective intervention for asocial adolescents in the areas of self-concept and behavior.

Emory's study utilized the horsemanship program provided in the "Aspects and Answers , A Manual for Therapeutic Horseback Riding Programs" .

In 1984, Fox, Lawlor and Luttges developed a test instrument to assess balance, coordination, and strength of participants in a therapeutic riding program. The study indicated that the sessions were provided by a "qualified riding instructor" in a "typical" 90-120 minute riding session.

The question arises as to what is a "typical" riding session. What processes work best? What is a "qualified" riding instructor? What teaching characteristics are most effective in the horseback riding session. These questions are largely unanswered through the current research.

DePauw in 1992 stated:

> "That which remains unstudied, or perhaps understudied, are the reasons why therapeutic riding is beneficial. Although the "product" (benefits) is known, an understanding of the process remains relatively unknown. Why does therapeutic riding work? How does therapeutic riding effect change in riders?"

In order to better understand the process of teaching therapeutic horseback riding, it is beneficial to look to other fields of study, specifically, regular education, special education, physical education, and adapted physical education.

Since the 1940's, research on teaching has focused on discovering what makes an effective teacher . Much of the early research was poorly designed with a variety of subjective rating scales developed. New research learned and built on

previous research. It was determined that teacher characteristics such as friendliness, warmth, praise, flexibility, or imagination did not distinguish between more effective and less effective teachers. This caused a shift to process-product research . Current research looks to identify teaching behaviors that correlate highly with improved student achievement - or effective teaching. This research continues today with much controversy amongst educational professionals as can be evidenced by educational reform and the questioning of national student achievement.

Latham in 1985 said that "teachers generally do not understand the science of instruction" (p.29) and that teachers proceed "intuitively rather than scientifically and professionally." (p17). To investigate this suggestion, he conducted a survey of professional engineers, physicians, lawyers, and educators. He asked these professionals how they would solve a problem related to their work. He found that the educators proceeded "intuitively, and with conventional wisdom" (p. 19). The representatives from the other three professions proceeded on "basis of principle, law, and science: in other words, professionally" (p 19).

Gage (1984) feels that teaching is a combination of art and science. Knowledge of subject matter does not automatically make a teacher. He states that:

> Thus generations of teacher education students have been given inadequate grounding in how to teach. They have not been taught how to organize a

> course, how to plan a lesson, how to manage a class, how to give an explanation, how to arouse interest and motivation, how to ask various kinds of questions, how to react to students' responses, how to give helpful correction and feedback, how to avoid unfair biases in interacting with students- in short how teach. (p.92)

If teachers do not understand how to teach, can they be trained to improve their teaching skills? The general consensus is yes. A study by Metcalf & Cruickshank (1991) concluded that training can improve clarity of pre-service teachers. Student learning significantly improved when taught by trained teachers rather than untrained teachers.

Brophy (1986) indicates that process-product research has begun to create a knowledge base for the teaching profession. This knowledge can assist teachers in improving their teaching skills. The research seems to point to two common themes:

> One is that achievement is influenced by the amount of time that students spend engaged in appropriate academic tasks. The second is that students learn more effectively when their teachers first structure new information for them and help relate it to what they already know, and then monitor their performance, and provide corrective feedback during recitation, drill, practice, and application activities. (p1076).

Bickel and Bickel (1986) feel that the knowledge base established by the research of effective teaching is pertinent to any instructional setting. Special education and regular education teachers can learn from each other. If this is true, therapeutic riding instructors can learn much from the research in regular and

special education. However Bickel and Bickel cautions that more research is needed in the specific area of special education and teacher effectiveness.

Nowacek, McKinney, and Hallahan (1990) question whether research on effective teaching can hold true for all disciplines. They suggest that variables exist in various teaching settings and with different populations that can effect research results. The findings of their study support this suggestion. They indicate that several teacher behaviors occurred at different frequencies in different educational levels, in different types of classrooms, and between more and less effective teachers. These findings can have implications for therapeutic riding instructors. Can the knowledge base of effective teaching be applied to therapeutic riding? How will the variables provided by therapeutic riding effect the application of the knowledge base? What are the variables (ie: motor skills, bonding of the animal and student, risk activity, etc.).

A look at the teacher effectiveness research in the fields of physical education and adapted physical education can prove very beneficial. In 1977 Locke suggested that the field of physical education was failing at teacher research. Because of this failure, several conclusions appeared to carry weight:

1. Teaching is a personal art which can't be subject to logical analysis, much less systematic inquiry.
2. Teaching motor skills is a simplistic matter which is too obvious to require scientific study. In physical education classes all the students need is a safe and supportive environment, which can be provided by any well intentioned adult with a fair supply of common sense.

> 3. Teaching itself is irrelevant because other factors (such as ability and social context) control most of the variance in student achievement. (p.4)

Locke feels that these conclusions are incorrect. He points out that research into classroom teaching has started to support his conclusion. Because of the lack of research, he challenged physical education to conduct more and better research. This challenge sparked a new era of research into the teaching of physical education. A similar challenge would be appropriate for therapeutic riding.

Silverman (1991) suggests that research into teaching of physical education is no longer new or dismal as described by Locke. He states that :

> From the literature we can conclude that teachers who present a clear explanation and demonstration, allocate time for motor skill practice, and structure practice so that students are appropriately or successfully engaged will promote student learning.

He points to a continued need for research, especially in the area of effectiveness research. A careful analysis of this shift in research can have interesting implications for therapeutic riding- especially in the area of effectiveness research.

Specific issues are raised by Lavay and Lasko-McCarthey (1992) relevant to adapted physical education research with special needs populations. These issues are worth mentioning here as they have implications for therapeutic riding research. One issue is the difficulty in locating large and homogenous samples for research. Another is the lack of standardized test instruments. They suggest the use of alternative research designs such as case studies and single-subject designs.

With regular education, special education, physical education and adapted physical education all struggling to determine what are the measures of teacher effectiveness and how teachers affect the process, it is little wonder that therapeutic horseback riding or horseback riding in general has barely begun to scratch the surface.

Why is there not more interest in the process of teaching horseback riding? It is possibly a question of evolution and timeliness. This brings up two questions: 1. What is the perceived quality of therapeutic riding instruction. 2. Is therapeutic riding viewed as a profession or an art. In an attempt to answer these questions, a questionnaire was completed by 17 riding instructors that teach therapeutic horseback riding to persons with disabilities and 22 past or present members of the NARHA Accreditation and NARHA Instructor Certification Committee. Table 1. shows the Characteristics of both samples.

Table 1. Characteristics of Instructor and Evaluator Samples

	Instructors (N = 17)			Evaluators (N=22)		
	M	SD	Range	M	SD	Range
Age in Years	37.65	8.87	22-53	43.5	10.35	31-70
Years Instructing Able-bodied Riders	8.94	8.20	0-25	16.45	11.99	0-45
Years Instructing Disabled Riders	6.18	5.06	.5-14	13.64	8.40	5-40

Both the Instructors and the Evaluators were asked to indicate whether riding instruction was considered a profession or an art. This question posed problems for the Evaluator group as indicated by notes written in the margins: "hard to choose". "Agh, what a choice"' "I think instruction is also an art"' and "not necessarily a fixed science, needs to allow for creativity". Two Instructors wrote comments: "I really feel it is a combination of profession and art"; "you can not separate these ideas". This uncertainty reinforces the premise that the profession and art of teaching riding are interrelated as supported by education research. Table 2. shows that the Instructors tended to view therapeutic riding instruction as an art and the Evaluators tended to view therapeutic riding instruction as a profession. It appears that the Evaluators who tend to be more experienced, older, and obtained recognition through certification view therapeutic horseback riding as more of a profession. Because Evaluators are striving to develop standards, improve quality, and gain more acceptance in the professional world, they are more likely to think of riding as a profession. The Instructors who tend to be less experienced may have not yet identified how they proceed in the instructional setting and therefore have not developed a professional outlook.

Table 2: Profession or an Art

Chi Square correlation between Instructors and Evaluators

	Profession	Art
Evaluators	**19(14.19)**	**2(6.811)**
Instructors	**6(10.81)**	**10(5.189)**

Test Statistic Chi Square = 11.63 Critical Value Chi Square = 6.6

P = 6.5E-04 DF = 1 Level of Significance = .01

The evaluator group was asked to rate their overall impression of the quality of instruction provided by therapeutic riding instructors at NARHA operating centers on a scale of 1 (poor) to 5 (excellent). Fifteen (68.18%) of the evaluators indicated that instruction was provided at the 3 or 3.5 level. Evaluator comments best illustrated the quality of instruction: "most are adequate", "very few qualify as being excellent", "is improving", "there are some great and some very poor instructors"' "some excellent programs and instruction but due to lack of education, some very poor", and "broad range seen, heavier lower on scale than higher"' The results suggested that therapeutic riding instructors need to improve their skills in order to improve effectiveness.

Horseback riding in the United States is a conglomeration of ideas, methodology, styles, opinions, etc. The United States is a large country that does not share the structure or small size of some of the European Countries. While most European Countries have very structured and systematic horsemanship training courses, the United States tends to do its own thing. This brings up the question as to how do riding instructors obtain the skills needed to teach horseback riding? Many instructors learn from mentors, are self-taught, or attend a college, university or specialty riding school.

A project to obtain curriculum information from instructor training programs was initiated to obtain a better perspective on what training is available in the equestrian and therapeutic riding fields. Further investigation into curriculum content of training programs would be very helpful

A review of equestrian books containing specific information for horseback riding instructors demonstrated only a precursory review of riding instructor qualities. Books reviewed included The Calvary Manual of Horsemanship and Horsemastership by Gordon Wright (1962) , How to Teach Group Riding by Haley (1970), The Riding Teacher by Podhajsky (1973), George Morris Teaches Beginners to Ride by Morris (1981), The Riding Instructors Handbook by Mortimer (1981), Teaching Better Riding by Habermann (1990) and The Instructors Handbook of the British Horse Society and the Pony Club (1985). The

major portion of the material presented is concerned with riding skills. Desirable qualities such as patience, dress neatly, knowledge of subject matter, and audible are listed with varying explanations. Several of the books give a limited discussion to objectives, goals, and systematic progression. Mortimer (1981) suggests that "very little has been written on how to actually teach a particular skill or theory (p 9).

Four recent sources have presented more information about the teaching process. The NARHA Instructor Workshop Book (1992) is available to those who attend NARHA's two and one half day instructor workshop. The CANTRA Instructor's Manual (1986) and The Camp Horsemanship Association Instructor Manual (1985) provide more in-depth information about the teaching process. Therapeutic Riding Programs Instruction and Rehabilitation (Engel, Ed, 1992) provides a chapter of contributions from various authors concerning teaching and learning skills and techniques.

To develop a knowledge base of measures of riding instructor effectiveness, a list of instructional skills (Table 3) was compiled based on previous literature in education and riding instruction.

Table 3: List of Instructional Skills of Riding Instructors

Clarity of Objectives
Uses variety of instructional strategies to achieve objectives
Class organization
Prepared for class
Knowledge of horsemanship
Knowledge of equipment
Knowledge of disabilities
Knowledge of safety
Clarity of explanations and examples
Level of teaching appropriate for lesson and students
Pace of teaching appropriate for lesson and students
Demonstrates good listening skills
Modifies instruction to accommodate student needs
Good interpersonal relations
Motivates students
Encourages students to ask questions
Uses questions to assess student understanding
Provides feedback and corrections
Provides appropriate praise
Accepts varied student viewpoints and encourages elaboration
Provides learning experience which enables student to transfer learning

The list of Instructional Skills from Figure 3 were provided to seven members of the NARHA Accreditation Committee. The members were asked to rate the importance of each skill on a scale of 1 (not important) to 5 (very important). The skills that were considered the most important (Table 4) were included on the questionnaires that were completed by the 17 Instructors and 22 Evaluators.

Table 4: Instructional Skills of Riding Instructors- Condensed List

Knowledge of horsemanship
Knowledge of equipment
Knowledge of disabilities
Knowledge of safety
Clarity of explanations and examples
Modifies instruction to accommodate student needs
Motivates students
Provides feedback and corrections
Class organization.

Both of the Instructors and the Evaluators were asked to rate the items (from Table 4) on a scale of 1 (not important) to 5 (very important). Both the Instructors and the Evaluators rated the items on the very important end of the scale. A rank was determined for each item in order to compare responses provided by the instructors and the evaluators. Safety was the number one choice for both the Instructors and the Evaluators (100%) The Instructors and the Evaluators agreed on the second item: Modifies instruction to accommodate student needs. The rest of the rankings varied between the two groups. Results of the rating of Instructor Effectiveness is provided in Table 5. There is however, a continued need to develop a knowledge base for therapeutic horseback riding for measures of effective teaching. Consensus among the professional riding instructors helps contribute to that base.

Table 5: Measures of Instructor Effectiveness

	Instructors						Evaluators					
	1	2	3	4	5	Rank	1	2	3	4	5	Rank
Class Organization	0	0	2	3	12	(6)	0	0	1	7	12	(9)
Knowledge of Horsemanship	0	0	0	3	14	(3)	0	0	1	5	16	(6)
Equipment	0	0	0	6	11	(5)	0	0	2	6	14	(8)
Disabilities	0	1	1	4	11	(7)	0	0	1	4	17	(5)
Safety	0	0	0	0	17	(1)	0	0	0	0	22	(1)
Clarity	0	0	0	4	13	(4)	0	0	0	4	18	(4)
Modify Instruction	0	0	0	2	15	(2)	0	0	0	1	21	(2)
Motivates Students	0	0	1	4	12	(5)	0	0	1	6	15	(7)
Feedback and Corrections	0	0	0	4	13	(4)	0	0	0	3	19	(3)

Rating scale: 1 (not important) to 5 (very Important).

Rank was determined by multiplying the number of responses times the corresponding rating scale number (1-5) and summing the totals.

This list of measures of Instructor Effectiveness provides a good start. If these are the most important measures than these are the skills that need to be

taught to riding instructors to improve quality and effectiveness of instruction. Lets take a closer look at these measures.

KNOWLEDGE OF SUBJECT includes the measures of Horsemanship, Equipment, Disabilities and Safety. A thorough understanding of the subject is imperative. The instructor must dissect, question, and completely understand the subject in order to confidently and knowledgeably teach therapeutic horseback riding. The instructor must totally understand his own theory of riding as well as other theories of riding. The instructor must learn about the disabilities that he teaches. Knowledge of equipment is essential not only for proper fit to horse and rider but also to improve effectiveness of the instruction. It is not surprising that safety was number one ranked measure. Therapeutic horseback riding is a risk sport. The horse is an animal that the only thing totally predictable about him is that he is unpredictable. An understanding of horse psychology, behavior, vices, etc. plays an important part in conducting a safe riding program. An effective teacher always strives to gain more knowledge.

CLARITY is a measure that is very prominent in all teacher effectiveness research. Instructors must give clear and concise explanations in order to be effective and promote student learning. Clarity does not come naturally and instructors must continually work to improve clarity. An explanation has two characteristics: 1. It explains what it is supposed to explain and 2. It is

understandable. Good knowledge of the subject matter improves clarity. It is difficult to explain clearly if you do not thoroughly understand what you are explaining. Always think about what you are saying. It is helpful to rephrase explanations if someone is not understanding. Watching a videotape of your instruction can help you spot clarity problems. Samples include such confusing statements as : "Circle and reverse" "Pull back " "pull your right hand" . Levine (1989) said: "The mediocre teacher tells. The good teacher explains" Students need the hows and whys, not just a traffic cop in the ring.

MODIFY INSTRUCTION: A effective instructor is able to adapt instruction to the situation. A well planned lesson often has to be changed half way through the lesson.

FEEDBACK AND CORRECTIONS: Feedback is needed to enable the student to improve. Teachers make split second decisions during performance feedback. Timing of feedback is important- the sooner the better. Specific feedback is better than general feedback. Rink in 1985 observed:

> There was a time in the early development of teaching skills in physical education when high rations of feedback to student were encouraged regardless of the appropriateness of that feedback or the quality of the students responses. The joke became that you can always tell a student teacher because you wind them up and they say, Good job!

Instructors should listen to their lesson on videotape and can count a large number of good jobs during a lesson, then the feedback is not appropriate or effective.

MOTIVATES STUDENTS: The horseback riding setting is often motivational in nature. The instructor can effect the students motivation in positive and negative factors. Examples include: If you do not challenge a rider, the rider can become bored and loose self-confidence and become unmotivated. The instructor can also provide tasks that are fun and motivational.

CLASS ORGANIZATION: Good class organization provides a more effective learning situation.

In conclusion, the therapeutic riding industry must take up the challenge of identifying meaningful relationships between effective teaching and student learning. Process-product research is needed in all areas of therapeutic riding. Although it is important to document the product ie: the success of therapeutic riding, it is equally important to learn how that success is achieved- the process.

A major key appears to be conducting research to determine what comprises effective teaching in therapeutic riding. A review of the literature in regular riding and therapeutic riding is a starting point. More investigation into the riding instructor curriculums offered at colleges, universities, and specialty schools could provide a better understanding of what and how skills are currently being taught to riding instructors.

Continued review of teacher effectiveness research in the fields of regular education, special education, physical education, and adapted physical education

can be valuable to assist in focusing therapeutic riding instructor research. Careful consideration must be given to the research design. Variables unique to therapeutic riding must be reviewed. Variables include the variety of disabilities served, the differences in the horses used, and therapeutic riding instructors that vary greatly in their knowledge of subject matter and ability to teach. These variables will effect research results and must be given careful consideration.

Scientific pedagogical investigation is necessary to the progression of therapeutic horseback riding. As therapeutic riding is looking for acceptance in the professional world, we must be willing to improve, validate and produce results. In addition to conducting reliable and valid research, the results must be published in order to develop a recognized knowledge base for the process of teaching therapeutic horseback riding and the instructors must strive to improve their skills and effectiveness.

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